

IN THE CLAIMS

Claims 1-39 (cancelled)

Claim 40 (new): A method of treating household waste comprising the steps of:

- (a) separating any non-biodegradable waste above a predetermined size from the household waste for subsequent disposal;
- (b) shredding the remaining household waste in a shredder;
- (c) mixing the shredded household waste with an alkali solution to form an alkali and household waste mixture having a pH above 11.5;
- (d) separating any remaining metallic waste from the alkali and household waste mixture for subsequent disposal;
- (e) separating any wood or plastics material from the alkali and household waste mixture for subsequent disposal;
- (f) removing any gases emitted by the alkali and household waste mixture;
- (g) subjecting the alkali and household waste mixture to a centrifuge to form sludge cake having a liquid content of between 60% and 95%, and untreated water; and
- (h) mixing the sludge cake with a dry mix of aggregate and cement to form a concrete mixture.

Claim 41 (new): A method of treating household waste as claimed in claim 40, in which the step of separating any remaining metallic objects from the alkali and household waste mixture for subsequent disposal further comprises passing the alkali and household waste mixture through an eddy magnet.

Claim 42 (new): A method of treating household waste as claimed in claim 40, in which the step of separating any wood or plastics material from the alkali and household waste mixture for subsequent disposal comprises passing the alkali and shredded household waste mixture through a floatation tank and skimming the wood and plastics material from the floatation tank.

Claim 43 (new): A method of treating household waste as claimed in claim 40, in which the further step is carried out of passing the untreated water to a water treatment plant for sanitation and recycling.

Claim 44 (new): A method of treating household waste as claimed in claim 40, in which the additional step is carried out of pouring the concrete mixture into plastic containers to prevent inadvertent leaching of contaminants from the concrete mixture.

Claim 45 (new): A method of treating household waste as claimed in claim 40, in which the gases removed from the alkali and household waste mixture are passed to a burner for burning.

Claim 46 (new): A method of treating household waste as claimed in claim 40, in which the step of mixing the shredded household waste with an alkali solution further comprises mixing the household waste with an alkali solution having a pH equal to or above 12.5.

Claim 47 (new): A method of treating household waste as claimed in claim 46, in which the alkali solution has a pH above 13.

Claim 48 (new): A method of treating household waste as claimed in claim 46, in which the alkali solution has a pH above 13.5.

Claim 49 (new): A method of treating household waste as claimed in claim 40, in which the sludge cake is added in sufficient quantities so that the sludge cake forms between 5% and 50% by weight of the concrete mixture.

Claim 50 (new): A method of treating household waste as claimed in claim 49, in which the sludge cake is added in sufficient quantities so that the sludge cake forms between 10% and 40% by weight of the concrete mixture.

Claim 51 (new): A method of treating household waste as claimed in claim 49, in which the sludge cake is added in sufficient quantities so that the sludge cake forms between 15% and 30% by weight of the concrete mixture.

Claim 52 (new): A method of treating household waste as claimed in claim 40, in which the aggregate and cement are mixed together in a separate container prior to mixing with the sludge cake.

Claim 53 (new): A method of treating household waste as claimed in claim 40, in which the step of mixing the household waste with an alkali solution further comprises mixing the household waste with a concrete hardener.

Claim 54 (new): A method of treating household waste as claimed in claim 40, in which the additional step is carried out of adding a bonding agent to the concrete mix.

Claim 55 (new): A method of treating household waste as claimed in claim 54, in which the bonding agent has a pH in the region of 8 to 11.

Claim 56 (new): A method of treating household waste as claimed in claim 40, in which the aggregate comprises one or more of grey wacke stone, sand, sandstone, gravel, limestone, crushed shale, crushed seashells, pencil, kiln dried sand, grit, pulverised fuel ash, slag from steelworks, and recycled crushed concrete.

Claim 57 (new): A method of treating household waste as claimed in claim 40, in which the method further comprises the additional step of allowing the concrete mixture to set and after a predetermined length of time, crushing the concrete mixture for subsequent re-use as an aggregate in the method.

Claim 58 (new): A method of treating household waste as claimed in claim 40, in which the method further comprises the step of adding water to the concrete mixture, on addition of the sludge cake to the cement and aggregate mixture.

Claim 59 (new): A method of treating household waste as claimed in claim 40, in which the method further comprises the step of adding a detergent to the concrete mixture prior to curing.

Claim 60 (new): A method of treating household waste as claimed in claim 40, in which the sludge cake, cement and aggregate are mixed in a ratio of 1:1:6 by weight to form the concrete mixture.

Claim 61 (new): A method of treating household waste as claimed in claim 40, in which the method further comprises the step of

milling the household waste prior to separating any wood or plastics material therefrom.

Claim 62 (new): A method of treating household waste as claimed in claim 40, in which the step of mixing the sludge cake with the cement and aggregate to form a concrete mixture is performed in the mixing drum of a concrete mixing truck.

Claim 63 (new): A method of treating household waste as claimed in claim 40, in which the sludge cake has a solids content of between 10 and 40%.

Claim 64 (new): A method of treating household waste as claimed in claim 63, in which the sludge cake has a solids content of between 10 and 25%.

Claim 65 (new): A method of using household waste in the production of concrete comprising the steps of mixing cement, aggregate and household waste together to form a concrete mix, characterized in that the method further comprises the initial steps of:

- (a) shredding the household waste to a predetermined particle size;

- (b) mixing an alkali solution with the shredded household waste to form an alkali and household waste mixture having a pH equal to or greater than 11.5, prior to mixing with the cement and the aggregate.

Claim 66 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the alkali solution is added to the shredded household waste so that the alkali and household waste mixture has a liquid content by

weight of between 60% and 90%.

Claim 67 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the alkali solution is added to the shredded household waste so that the alkali and household waste mixture has a liquid content by weight of between 75% and 90%.

Claim 68 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the method further comprises the steps of :

- (c) passing the alkali and household waste mixture through a centrifuge to separate the alkali and household waste mixture into sludge cake having a liquid content by weight of between 60% and 90%, and untreated wastewater;
- (d) drawing off the untreated wastewater and leaving only the sludge cake; and
- (e) mixing the sludge cake with the cement and aggregate mixture.

Claim 69 (new): A method of using household waste in the production of concrete as claimed in claim 68 in which the alkali and household waste mixture are passed through a centrifuge until the sludge cake has a liquid content of between 75% and 85%.

Claim 70 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the household waste is shredded to provide a shredded household waste having an average particle size of between 1mm and 10mm.

Claim 71 (new): A method of using household waste in the production

of concrete as claimed in claim 70 in which the household waste is shredded to provide a shredded household waste having an average particle size of between 3mm and 8mm.

Claim 72 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the alkali solution added to the household waste is a concrete hardener.

Claim 73 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the method further comprises the step of adding a bonding agent to the concrete mix.

Claim 74 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the step of adding an alkali solution to the shredded household waste further comprises the step of adding an alkali solution having a pH equal to or above 12.5.

Claim 75 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the alkali and household waste mixture comprises between 5 and 50% by weight of the concrete mixture.

Claim 76 (new): A method of using household waste in the production of concrete as claimed in claim 75 in which the alkali and household waste mixture comprises between 10% and 40% by weight of the concrete mixture.

Claim 77 (new): A method of using household waste in the production of concrete as claimed in claim 75 in which the alkali and household waste mixture comprises between 15% and 30% by weight of the concrete mixture.

Claim 78 (new): A method of using household waste in the production of concrete as claimed in claim 65 in which the alkali and household waste mixture, cement and aggregate are mixed in the ratio 1:1:6 by weight to form the concrete mixture.